fifteen to twenty years several methods for producing transgenic plants have been developed, and the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid maize line 33R77.

In the Claims

Claims 6, 8, 10-12, 14-16, 18, 19, 21, 23-25, 27-29 and 31 have been amended as follows:

6. (Amended)

The tissue culture according to claim 5, the cells or protoplasts being from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

8. (Amended)

The maize plant of claim 2 wherein said plant has been manipulated to be male sterile.

10. (Amended)

The method of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

11. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 2, wherein said maize plant has derived at least 50% of its ancestral alleles from 33R77 and is capable of expressing a combination of at least two 33R77 traits selected from the group consisting of: high yield for its maturity, above average stalk quality, ability to produce high and consistent grain yield across its comparative relative maturity zone, suited to the Central Corn Belt, Southeast, Southcentral, Southwest, and Western regions of the United States, and a relative maturity of approximately 113 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

12. (Amended)

The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more transgenes.

14. (Amended)

The method of claim 13 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

15. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 12, wherein said maize plant has derived at least 50% of its ancestral alleles from 33R77 and is capable of expressing a combination of at least two 33R77 traits selected from the group consisting of: high yield for its maturity, above average stalk quality, ability to produce high and consistent grain yield across its comparative relative maturity zone, suited to the Central Corn Belt, Southeast, Southcentral, Southwest, and Western regions of the United States, and a relative maturity of approximately 113 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

16. (Amended)

The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

18. (Amended)

The method of claim 17 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

19. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 16, wherein said maize plant has derived at least 50% of its ancestral alleles from 33R77 and is capable of expressing a combination of at least two 33R77 traits selected from the group consisting of: high yield for its maturity, above average stalk quality, ability to produce high and consistent grain yield across its comparative relative maturity zone, suited to the Central Corn Belt, Southeast, Southcentral, Southwest, and Western regions of the United States, and a relative maturity of approximately 113 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

21. (Amended)

The maize plant of claim 20 wherein said maize plant has been manipulated to be male sterile.

23. (Amended)

The method of claim 22 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

24. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 20, wherein said maize plant has derived at least 50% of its ancestral alleles from 33R77 and is capable of expressing a combination of at least two 33R77 traits selected from the group consisting of: high yield for its maturity, above average stalk quality, ability to produce high and consistent grain yield across its comparative relative maturity zone, suited to the Central Corn Belt, Southeast, Southcentral, Southwest, and Western regions of the United States, and a relative maturity of approximately 113 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

25. (Amended)

The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more transgenes.

27. (Amended)

The method of claim 26 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

28. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 25, wherein said maize plant has derived at least 50% of its ancestral alleles from 33R77 and is capable of expressing a combination of at least two 33R77 traits selected from the group consisting of: high yield for its maturity, above average stalk quality, ability to produce high and consistent grain yield across its comparative relative maturity zone, suited to the Central Corn Belt, Southeast, Southcentral, Southwest, and Western regions of the United States, and a relative maturity of approximately 113 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

29. (Amended)

The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

31. (Amended)

The method of claim 30 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

Please add new claims 33-43 as follows:

33. (New)

A method of making a hybrid maize plant designated 33R77 comprising:

crossing an inbred maize plant GE515419, deposited as _____ with a second inbred maize plant GE567914, deposited as _____; and

developing from the cross a hybrid maize plant representative seed of which having been deposited under ATCC Accession Number _____.

34. (New)

A method of making an inbred plant comprising:

obtaining a hybrid maize plant 33R77 and

generating from said hybrid maize plant a parental inbred parent line, said line selected from the group consisting of GE515419 deposited as _____ and GE567914 deposited as _____.

35. (New)

The method of claim 34 wherein said generating step comprises using double haploid breeding.

36. (New)

A method of producing a 33R77 progeny maize plant in a plant breeding program comprising:

obtaining the maize plant, or its parts, produced by growing the hybrid maize seed designated 33R77,

utilizing said plant or parts thereof as a source of breeding material, and preferentially selecting for a 33R77 progeny plant with at least two desirable morphological or physiological characteristics of the plant or parts thereof produced by growing the hybrid maize seed designated 33R77,

said at least two morphological or physiological characteristics selected from the characteristics listed on the chart in Tables 1-4, thereby producing said progeny maize plant.

37. (New)

The 33R77 progeny maize plant produced by the method of claim 36, wherein the pedigree of said 33R77 progeny maize plant has two or less cross-pollinations to a maize plant other than the hybrid maize seed designated 33R77.

38. (New)

The method of claim 36 wherein the maize plant breeding program comprises one or more of the following: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, making double haploids and transformation techniques.

39. (New)

A method for producing a population of 33R77 progeny hybrid maize plants comprising:

(a) obtaining a first generation progeny maize seed produced by crossing the maize plant produced by growing the hybrid maize seed designated 33R77 with a second maize plant;

(b) growing said first generation progeny maize seed to produce F_1 generation maize plants and obtaining self-pollinated seed from said F_1 generation maize plants;

(c) growing said self-pollinated seed to produce F_2 maize plants and obtaining further self-pollinated seed from said F_2 maize plants; and

(d) repeating the steps of growing and harvesting successive filial generations by selecting for morphological and physiological traits in Table(s) 1-4 to obtain a population of 33R77 progeny hybrid maize plants.

40. (New)

The population of 33R77 progeny hybrid maize plants produced by the method of claim 39, said population, on average, deriving at least 50% of its ancestral alleles from 33R77.

41. (New)

A hybrid seed selected from the population of 33R77 progeny hybrid maize plants produced by the method of claim 39, said hybrid seed deriving at least 50% of its ancestral alleles from 33R77.

42. (New)

The method of claim 39, further comprising applying double haploid methods to said F_1 generation maize plant or to a successive filial generation thereof.

43. (New)

A method of producing an hybrid maize plant derived from the maize variety 33R77, the method comprising the steps of:

(a) preparing a progeny plant derived from maize variety 33R77 by crossing a plant of the maize variety 33R77 with a second maize plant, wherein a sample of the seed of the maize variety 33R77 was deposited under ATCC Accession No. _____;

(b) crossing the progeny plant with itself or a second plant to produce a seed of a progeny plant of a subsequent generation;

(c) growing a progeny plant of a subsequent generation from said seed and crossing the progeny plant of a subsequent generation with itself or a second plant; and

(d) repeating steps (b) and (c) for an additional 3-5 generations to produce a hybrid maize plant derived from the hybrid variety 33R77.